



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,457	02/09/2004	Ryuichiro Macyama	053588-5021	3603
9629	7590	10/17/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			CHEN, SOPHIA S	
			ART UNIT	PAPER NUMBER
			2852	
DATE MAILED: 10/17/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/773,457

Applicant(s)

MAEYAMA ET AL.

Examiner

Sophia S. Chen

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7 and 11-20 is/are rejected.
- 7) ☒ Claim(s) 4 and 8-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/4/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: θ , R, and Z (Figure 9). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "motor to make the housing component vibrate" (claim 10) and "the measuring component measures the speckle after (emphasis added) fixing of the recorded image onto the recording medium has been carried out by the fixing component" (claim 18) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-3, 5-7, 11, 14, 15, and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by Hayashi et al. (WO 03/059631 A1).

Hayashi et al. discloses a recording media identifier comprising: a measuring component 70, which irradiates a recording medium P with a predetermined light to measure a speckle, caused by light irradiation, appearing on the recording medium P (page 16, line 21 to page 17, line 4; page 17, lines 9-20; the English translation can be found in the equivalent US 2004/0246290 A1, paragraphs [0117] and [0118]); a storage component ROM 52, which stores information on speckles of recording media P (page 26, lines 12-15; the English translation can be found in the equivalent US 2004/0246290 A1, paragraph [0179]); an identifying component CPU 51, which identifies types of recording media P on the basis of the speckles measured by the measuring component 70 and of information on speckles stored in the storage component ROM 52 (page 26, lines 20-25 and step 350 of Figure 10; the English translation can be found in the equivalent US 2004/0246290 A1, paragraph [0181]); the identifying component CPU 51 identifies types of recording media P based on speckle patterns (abstract and page 26, lines 12-15 and 20-25); the identifying component CPU 51 identifies types of recording media P on the basis of vectors representing movements in speckles (Figure 12); the measuring component 70 measures the speckle in each of a plurality of different measuring conditions (The measuring step is operated while the recording medium P is moving; therefore, it is inherently the measuring conditions are different.); the plurality of measuring conditions differs in accordance with positions of the recording medium P at times of measurement (Figure 1); and the identifying component CPU 51 identifies each of a plurality of recording media P of the same type (inherently).

Hayashi et al. further discloses a recording component 31, which records an image on a recording medium P by printing; the recording component 31 adjusts recording conditions to corresponds to types of recording media P identified by the recording media identifier CPU 51 (page 27, lines 14-16; the English translation can be found in the equivalent US 2004/0246290 A1, paragraph [0185]); and a conveyor component (feed roller) 21, which conveys the recording media P, wherein the measuring component 70 measures a speckle while the recording medium P is being conveyed by the conveyor component 21 (Figure 1).

5. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. in view of Lüdi et al. (US Pat. No. 6,220,686 B1)

Hayashi et al., as discussed above, further discloses the measuring component 70 includes an irradiating component (semiconductor laser) 74, which irradiates a predetermined light (page 16, lines 21-24 and Figure 3; the English translation can be found in the equivalent US 2004/0246290 A1, paragraph [0117]); a light-receiving component 76, which receives the light, caused by predetermined light irradiation, scattered from the recording medium P, and outputs signals having an intensity corresponding to the luminous intensity of the scattered light received by the light-receiving component 76 (page 16, lines 21-24 and page 17, lines 5-8; the English translation can be found in the equivalent US 2004/0246290 A1, paragraphs [0117] and [0119]); a signal processing component 77, which binarizes the signals outputted from the light-receiving component 76 and outputs binary signals (inherently after A/D converter 72; Figure 5); and a direction, in which a center of an area in which light is received by the light-receiving component 76 travels on the recording medium P, corresponds with a direction in which the recording medium P is conveyed (Figure 12).

Hayashi et al. differs from the instant claimed invention in not disclosing a plurality of light-receiving components.

Lüdi et al. discloses a moving sensor comprising an irradiating component 37 and a light-receiving component 41 (or a plurality of light-receiving components) (column 3, lines 35-39 and 59-62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the plurality of light-receiving components as taught by Lüdi et al. in place of the single light-receiving component of Hayashi et al. because of the same functionality for receiving detected light.

9. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

10. Claims 14, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama (US Pat. No. 6,804,477 B2) in view of Hayashi et al.

Maruyama discloses a recording device 101 comprising: a recording media identifier, including a measuring component 30, which irradiates a recording medium 32 with a predetermined light (column 4, lines 28-34); a storage component 131 (Figures 2 and 5 (steps S55 and S56)); an identifying component 131; a recording component 106; a fixing component 122 which fixes, onto the recording medium 32, an image recorded by the recording component 106, wherein the measuring component 30 performs measuring before fixing the recorded image onto the recording medium 32 is carried out by the fixing component 122 (Figure 1); and the fixing component 122 of the recording device 101 adjusts fixing conditions to correspond to types of recording media 32

identified by the recording media identifier (column 5, line 62 to column 6, line 9; Figure 5).

Maruyama differs from the instant claimed invention in not disclosing the identifying component identifying types of recording media on the basis of the speckles measured by the measuring component and of information on speckles stored in the storage component.

Hayashi et al. discloses a recording media identifier comprising: a measuring component 70, which irradiates a recording medium P with a predetermined light to measure a speckle, caused by light irradiation, appearing on the recording medium P (page 16, line 21 to page 17, line 4; page 17, lines 9-20; the English translation can be found in the equivalent US 2004/0246290 A1, paragraphs [0117] and [0118]); a storage component ROM 52, which stores information on speckles of recording media P (page 26, lines 12-15; the English translation can be found in the equivalent US 2004/0246290 A1, paragraph [0179]); and an identifying component CPU 51, which identifies types of recording media P on the basis of the speckles measured by the measuring component 70 and of information on speckles stored in the storage component ROM 52 (page 26, lines 20-25 and step 350 of Figure 10; the English translation can be found in the equivalent US 2004/0246290 A1, paragraph [0181]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the recording media identifier as taught by Hayashi et al. in place of the identifier of Maruyama to have higher accuracy and higher quality because the recording media identifier of Hayashi et al. not only identifies the type of recording

Art Unit: 2852

medium but also determines the position of the recording medium (Hayashi et al., abstract).

11. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

12. Claims 14, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muramatsu (JP 2000-259044 A) in view of Hayashi et al.

Muramatsu discloses a recording device 1 comprising: a recording media identifier, including a measuring component 31, 32, 33, 34, which irradiates a recording medium Pa with a predetermined light (Figures 1 and 3); a fixing component 20a, 20b which fixes, onto the recording medium Pa, an image recorded by a recording component 2Y, wherein the measuring component 33, 34 performs measuring after fixing the recorded image onto the recording medium Pa is carried out by the fixing component 20a, 20b (Figure 1); and a conveyor component 15, which conveys the recording media Pa, and wherein the measuring component 31, 32, 33, 34 performs measurement while the recording medium Pa is not being conveyed by the conveyor component 15 (Figure 1).

Muramatsu differs from the instant claimed invention in not disclosing the identifying component identifying types of recording media on the basis of the speckles measured by the measuring component and of information on speckles stored in the storage component.

Hayashi et al. discloses a recording media identifier comprising: a measuring component 70, which irradiates a recording medium P with a predetermined light to measure a speckle, caused by light irradiation, appearing on the recording medium P (page 16, line 21 to page 17, line 4; page 17, lines 9-20; the English translation can be found in the equivalent US 2004/0246290 A1, paragraphs [0117] and [0118]); a storage component ROM 52, which stores information on speckles of recording media P (page 26, lines 12-15; the English translation can be found in the equivalent US 2004/0246290 A1, paragraph [0179]); and an identifying component CPU 51, which identifies types of recording media P on the basis of the speckles measured by the measuring component 70 and of information on speckles stored in the storage component ROM 52 (page 26, lines 20-25 and step 350 of Figure 10; the English translation can be found in the equivalent US 2004/0246290 A1, paragraph [0181]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the recording media identifier as taught by Hayashi et al. in place of the identifier of Muramatsu to have higher accuracy and higher quality because the recording media identifier of Hayashi et al. not only identifies the type of recording medium but also determines the position of the recording medium (Hayashi et al., abstract).

13. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Allowable Subject Matter

14. Claims 4 and 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Repsch (US Pat. No. 4,720,808) discloses a method and apparatus for measuring the weight per unit area and providing cross-sectional, longitudinal and diagonal profiles of density or thickness of moving manufactured sheet products.

Gagnon (US Pat. No. 5,650,851) discloses a method of determining the thickness of a transparent or semi-transparent suspended sheet by detecting the speckle.

Cloud (US Pat. No. 6,188,482 B1) discloses a speckle interferometer for measuring displacement of a surface.

Hayashi et al. (US Pat. Pub. No. US 2003/0156150 A1) discloses a motion sensor for detecting spot-like interference patterns on a recording medium.

Hayashi et al. (US Pat. Pub. No. US 2004/0246290 A1) discloses a motion sensor in a carriage determining the type of paper.


Luedi et al. (EP 0 926 631 A2) discloses a postage printing device comprising a sensor for detecting a moving speckle pattern in the light scattered from a mail piece.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
October 14, 2005